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Conference Abstract

Citizen (Science) Involvement in Data Digitization and Enrichment of the Insect Collection of the *Museu Nacional de História Natural e da Ciência* (Lisboa, Portugal)

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Abstract

The entomological collection of the *Museu Nacional de História Natural e da Ciência* (MUHNAC), *Universidade de Lisboa*, includes over 70,000 catalogued specimens, mostly from Portugal and some African countries (Lopes et al. 2016). However, many more remain uncatalogued and thus unavailable to the broader scientific community. To achieve our goal of full access, it is necessary to digitize and validate all data associated with these specimens.

Recently, a large private collection, comprised of several thousand specimens compiled by José Passos de Carvalho, was donated to the Museum. These specimens are prepared and labelled, however no catalogue is available. Therefore, the only available information about each specimen is on the respective label(s).

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To acquire this information, specimens are being photographed along with their labels (Fig. 1). Since digitization of specimen labels is labor intensive, we decided to use the Zooniverse platform to involve the public in this task. To this end we have developed a project (currently being tested), entitled "MB07 - The Insects of the Museu Nacional de História Natural e da Ciência", with a test dataset of 130 specimens of moths from the Sphingidae family (Insecta, Lepidoptera). The objective is to evaluate the potential of involving the public in the tasks of label transcription and taxonomic determination to enrich and speed collection digitization.

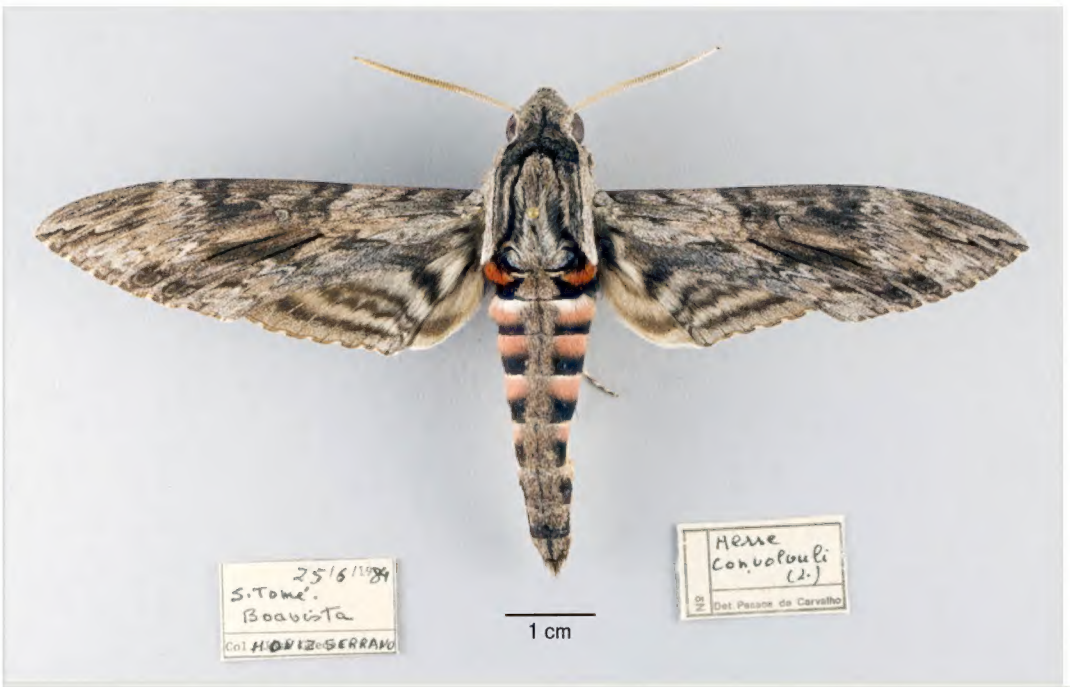

Figure 1.

Example of a photograph acquired in the MB07 project developed in the Zooniverse platform for label transcription and taxonomic determination. *Agrius convolvuli* (Linnaeus, 1758; Lepidoptera, Sphingidae) specimen from the *Passos de Carvalho* collection.

We have developed two distinct workflows: i) one in which users are asked to transcribe information from specimen labels, therefore a pure digitization task; and ii) a second workflow in which volunteers are asked to contribute new taxonomic information based on the specimen images. Therefore, the first task should be accessible to the general user while the second is more directed towards taxonomic specialists and not intended for the general public.

Here we present a preliminary analysis of our experience with this platform and of the obtained data.

Keywords

specimen data transcription, citizen science, entomological collections, Zooniverse

Presenting author

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References

- Lopes LF, Correia AM, Almaça A, Verdasca MJ, Silva PB (2016) Insect Collection from the Museu Nacional de História Natural e da Ciência, Universidade de Lisboa, Portugal. https://www.gbif.org/dataset/79673413-746f-48f2-bd8a-7cf27807317e. Accessed on: 2019-4-05.